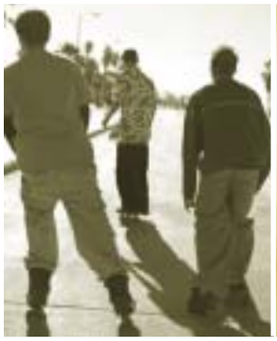
PolicyLink

Reducing Health Disparities Through a Focus on Communities

A PolicyLink Report





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PolicyLink is a national nonprofit research, communications, capacity building, and advocacy organization, dedicated to advancing policies to achieve economic and social equity based on the wisdom, voice, and experience of local constituencies.

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Preface

Persistent and significant disparities in health among different population groups have prompted innovative forms of health practice, new ideas for health policy, and research into the scope, causes, and consequences of disparities. Efforts to understand and address disparities include improving individual medical treatment, increasing access to culturally competent health services, and effective disease prevention strategies. Central to the new thinking and action is a focus on communities: the ways in which the places where people live can hinder or contribute to good health. The appreciation of a community's influence on health has, for example, already made community organizing a key strategy of some local clinics and public health departments. Epidemiologists are moving toward measuring the influence of neighborhoods and of social capital[1] on health outcomes.

This focus connects to one of the basic tenets of PolicyLink: that solutions to community problems require practices and policies oriented to making changes for the residents of a place, as well as to the physical attributes of a place.

PolicyLink is a national nonprofit research, communications, capacity building, and advocacy organization, dedicated to advancing policies to achieve economic and social equity based on the wisdom, voice, and experience of local constituencies. Since its inception in 1999, PolicyLink has been working with community-based practitioners in health care, community development, and other fields to document their successful innovations, build networks, and increase their capacity to influence policymaking. At the request of The California Endowment (TCE), we began to extend this perspective and experience to health disparities.

TCE, a California-focused health foundation, was formed in 1996 to expand access to affordable, quality health care for underserved individuals and communities. Through its grantmaking and strategic initiatives, the foundation is exploring health disparities in the context of places, including the development of community-oriented practices and analyses of the social determinants of health. TCE has funded the development and implementation of more effective policies and the creation of partnerships to decrease the incidence of certain diseases and conditions associated with health disparities.

This report draws on recently published research and insights from community-based practitioners across the country. The report is intended to frame the issue of health disparities and communities in a comprehensive, integrated manner and to suggest what new strategies, approaches, and policies may be needed. Conclusions are drawn from extensive review of the literature, as well as from interviews with researchers and practitioners working on reducing health disparities in communities across the country.

An extensive annotated bibliography was also completed for this project, and can be accessed via the PolicyLink website (www.policylink.org) beginning in February 2003. The bibliography includes more than 140 publications on all the issues discussed in this report.

PolicyLink looks forward to vigorously participating in this important discussion and to being a part of the advocacy for and the implementation of needed policies and programs. TCE looks forward to its continued participation and impact through its grantmaking and strategic initiatives.

This report was completed by a team of PolicyLink staff, with input from a roundtable of key practitioners and researchers,[2] and with the aid of several consultants. The PolicyLink team is led by Executive Vice President Judith Bell and includes Victor Rubin, the Director of Research; Mildred Thompson and Raymond Colmenar, Senior Associates; Rebecca Flournoy, Associate; Victoria Breckwich Vasquez, University of California at Berkeley doctoral researcher; and Jennifer Thompson, Program Assistant. Other PolicyLink staff contributing to the completion of the report were Janet Dewart Bell, Marshall McGehee, Maya Harris West, Robert Phillips, and Regina Aragón served as a consultant, contributing to all phases of the project design, research, and the drafting and editing of the report. Irene Yen, Rajiv Bhatia, and Melissa Kealey of the Public Health Institute completed the literature review and assessment of indicators projects. Marion Standish, Senior Program Officer at The California Endowment, initiated and funded the work, offering vital advice and perspective throughout.

Angela Glover Blackwell
President
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Robert K. Ross, MD
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Introduction

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There is broad consensus that people who live in more socially and economically deprived communities are in worse health, on average, than those living in more prosperous areas. While there is little question of the need for access to affordable and culturally appropriate health care, the Centers for Disease Control and Prevention has estimated that lack of access to care accounts for only about 10 percent of total mortality in the United States. Much of total mortality is explained instead by environmental conditions, social and economic factors, and health behaviors.[3]

This report explores the relationship between the communities in which people live and their health. What is it about living in certain communities that leads to poor health? How do community factors affect health? And what can be done to strengthen or improve them? Based on recent research, the report describes what community characteristics are important to promote or hinder good health and how these factors influence health.

A key purpose of this inquiry is to improve policies and practices aimed at reducing health disparities—the higher incidence of certain diseases and conditions, including asthma, heart disease, high blood pressure, and infant mortality in low-income communities and communities of color. This report presents evidence from research and practice of the key role that neighborhood—and what are sometimes referred to as "place-based"—factors play in determining health outcomes. It acknowledges these factors from the perspective of a "life course approach:" that neighborhood effects on health are cumulative and happen over time. The report also proposes principles and strategies to reduce health disparities that focus not only on individuals, but also on the neighborhoods and communities in which people live. The terms "neighborhoods" and "communities" are primarily geographic references. In this sense, neighborhood is the relatively small area in which people live, while community is defined more broadly in recognition of the fact that individuals and families live, work, and socialize in a wide array of geographic settings: neighborhood, city, and region.[4]

With a variety of neighborhood (place) and individual (people) factors playing a role in the development of health disparities, many strategies and approaches are required. Moreover, to achieve the ultimate goal of eliminating health disparities, the focus must be on making long-term changes.

Organization of This Report

This report draws upon interviews with more than 40 key informants—researchers and health and community-building practitioners—as well as a multifaceted literature review of over 140 studies and research papers.[5]

Chapter 2 summarizes what is known about the impact of socioeconomic status (SES) on health and why its consideration is critical to reducing health disparities. Influences of race and ethnicity in contributing to health disparities are discussed. The challenge researchers have faced when measuring the distinct impact of community factors on health is also included as is an exploration of recent methodologies that have helped overcome such barriers.

Building upon models developed by several researchers, chapter 3 presents a framework for understanding the ways in which neighborhood, or "place," is believed to affect health and presents findings from research and practice related to such factors.

Chapter 4 identifies key lessons taken from research and practice and discusses their implications for action. This section also explores some of the unique health challenges faced by communities that are not defined by places, for example, immigrants or migrant workers.

Chapter 5 recommends strategies for reducing health disparities and improving community health through a focus on place, including a set of principles to inform such strategies. The conclusion in chapter 6 suggests next steps for efforts to eliminate health disparities.

The first two appendixes delve into greater detail on two important areas of action. Appendix A presents information on various efforts to track health disparities in communities over time using indicators or benchmarks, emphasizing the need to develop indicators that reflect a broad definition of community health that is not limited to disease-specific outcomes. Appendix B describes three initiatives to improve health and reduce disparities in the state of Minnesota, Canada, and the United Kingdom, focusing on the social determinants of health. Appendix C contains the roster of roundtable participants who provided input for this report, and Appendix D contains the list of interviewees.

Why Social Determinants Matter for Health Outcomes

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There is increasing recognition that socioeconomic status, race and ethnicity influence health. Social determinants of health are formed continuously throughout the life cycle, with many critical influences occurring early in life.[6] Recent research also strongly suggests that differences in levels of health are affected by a dynamic and complex interaction among biology, behavior, and the environment, often referred to as the ecological, or multicausal model.[7]

The Relationship Between Socioeconomic Status and Health

Numerous researchers have documented the relationship of socioeconomic status (SES) to health.[8] In a causal framework,[9] the major resources enabling people to achieve better health include education, income, occupation, and wealth (assets), with education and income levels being among the strongest predictors of health. There is mounting evidence that the widening gap between the rich and the poor contributes to health disparities.[10]

"Studies show that health status improves at each step up the income and social hierarchy."

—Health Canada

SES shapes exposure to, and the impact of, a wide range of risk factors: mortality (death) and morbidity (poor health status) rates increase as SES decreases. This "gradient effect"—whereby each socioeconomic group has better health than the group just below it in the hierarchy—is especially significant across the broad lower range of socioeconomic position.[11]

The Effect of Race and Ethnicity on Health Outcomes

Race and ethnicity are also major determinants of socioeconomic position.[12] After adjusting for SES, racial differences persist in the quality of education, the family wealth associated with a given level of income, the purchasing power of income, the stability of

employment, and the health risks associated with occupational status.[13] With respect to health status, data suggest that, for most causes of death and disability, African Americans, Latinos, and American Indians suffer poorer health outcomes relative to whites with statistically equivalent levels of socioeconomic position.[14] To improve medical treatment and prevention and reduce health disparities, efforts have focused on diversifying the healthcare work force to better reflect the diversity of patients and to improve cultural sensitivity and competence.

Racial discrimination, evidenced partly through residential segregation, affects health through numerous pathways, including access to resources and opportunities, environmental conditions, and psychosocial factors.[15] For example, residential segregation by race and income can limit residents' access to health-promoting resources such as full-service grocery stores and safe, walkable neighborhoods, since such resources are less frequently found in low-income areas.[16] Consistent with these findings, many researchers and practitioners interviewed for this report asserted that race and ethnicity play a critical role in health disparities, citing a range of societal patterns, including low-quality education systems and subsequent poor student performance, that are shaped in large part by race relations.

"Though it is well known that these differences [racial and ethnic health disparities] reflect socioeconomic differences and inadequate health care, contemporary evidence suggests that racial, ethnic, class, and gender bias along with direct and indirect discrimination are also important factors."[17]

—Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare

Interviewees frequently mentioned the negative impact of chronic, race-related stress on health, ranging from incidences in daily life to institutional racism and internalized racism as contributing to disparities. This race-related stress and its negative health consequences cut across socioeconomic status. For example, middle-class black women with health insurance in Prince George's County, MD, had poorer birth outcomes than white women with the same income and professional status.[18]

Examples of the negative impacts of institutional racism include: a lack of providers of color in hospitals and clinics; a lack of multilingual staff; a lack of culturally competent caregivers in communities; patterns of unequal diagnosis and treatment; and a lack of responsiveness by medical training institutions. A recent Institute of Medicine report similarly found that racial and ethnic bias within healthcare institutions and among practitioners contributes to disparities.[19] Interviewees also described how internalized racism, associated with a sense of hopelessness and inability to envision a positive future, contributes to mental health problems among people of color, in particular depression among women, violence and suicide in men, and substance abuse.[20] One interviewee described environmental racism as a contributing factor in health disparities due to such things as poor housing conditions and a lack of clean air and water.

The interplay of ethnicity and SES is also significant for the health of immigrants. Immigrant communities face unique challenges, not just in obtaining quality health services, but also in acculturating into a new society and gaining access to service systems and supports. Two informants who administer clinics that serve Latinos, including large immigrant populations, expressed concerns about recent funding cuts to public health and hospital facilities, which have forced them to provide a wider range of "safety net" services than before. The informants have also observed an increase in diseases and conditions

among their clients that were not apparent a few years ago, including asthma and hepatitis C. They also reported increases in substance abuse, and domestic violence.[21]

Acculturation adds another layer of complexity for immigrant populations. For new immigrants, research has shown that race and ethnicity can have positive, protective effects on health. Often new immigrants' health outcomes are far better than would be expected given the many risk factors that they face. Studies of Latino health explain these improvements as being due in part to high levels of social support, kinship networks, cultural resiliency, and selective migration of immigrants.[22] The length of time in the United States, together with increasing acculturation, often contributes to a *decrease* in health status among many groups of immigrants.[23]

Neighborhood or "Place-based" Factors and Their Effects on Health

Researchers have also documented variations in health based on neighborhood residence for a wide range of outcomes, including: birth outcomes and infant mortality, children's physical health, child development, adult physical health, overall mortality, health-related behavior, and mental health.[24] What is less clear is the exact nature of the relationship between the places where people live and their health.

Multilevel statistical models, which rely on both neighborhood and individual level data, have shown that neighborhood differences in health outcomes exist *even after* adjusting for known individual risk factors.[25] Some researchers have pointed out that, given the reciprocal relationship between SES and neighborhoods, statistical analyses to measure the effects of income and education may unwittingly *understate* a neighborhood's overall contribution to health.[26]

Additional studies have documented the cumulative effects of these neighborhood factors on health. All interviewees acknowledged the importance of these factors on health and health disparities. Those managing programs and services described how they were trying to impact neighborhood factors to improve health. Alternatively, they discussed how they were developing services to compensate for neighborhood factors' negative effects on health. Projects tracking various health indicators over time have emerged to measure the impact of efforts to reduce health disparities and improve health. Healthy People 2010, initiated by the United States Department of Health and Human Services, is an example of a large-scale initiative with the goal of tracking progress toward the elimination of health disparities. (See Appendix A for an in-depth discussion of indicators projects.)

The Effect of Community Factors on Health: An Emerging Framework

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Several useful and complementary conceptual frameworks have been developed to name and organize various neighborhood factors that influence health. These frameworks provide policymakers and practitioners with analytical tools aimed at promoting health and reducing disparities. The following factors and frameworks are adapted and organized into three broad but related categories to differentiate the ways in which neighborhoods affect health:

- Social and Economic Environment—levels of poverty, racial and economic segregation, social networks, social organization, and political organization.[27]
- Physical Environment—both the characteristics of the physical environment, such as air and water quality and housing conditions, as well as the relative connectedness or isolation of a community to resources and opportunities, based on factors of location and transportation access.
- Services—the level of access to and quality of health services and other supportive public, private, and commercial services that contribute to healthy living.

These neighborhood factors influence health through at least four causal pathways: (1) direct effects on both physical and mental health; (2) indirect influences on behaviors that have health consequences; (3) health impacts resulting from the quality and availability of healthcare resources; and (4) health impacts associated with community residents' access to "opportunity structures."[28, 29] Opportunity structures include access to healthy and affordable food, the availability of safe and enjoyable spaces for exercise and recreation, access to economic capital, and transportation resources that may facilitate access to employment, education, and other opportunities.

Opportunity structures are neighborhood or community attributes that allow residents to live a healthier lifestyle.

The effects of these factors on each other and on health are likely to vary according to the economic, political, and social characteristics of a given place and time. A dynamic framework, as well as knowledge and appreciation of diverse neighborhood contexts, is therefore required to understand how and why

different places may lead to different health outcomes. One study conducted in Central Harlem stressed the importance of considering social networks when designing interventions: ". . . interventions must also build on and support the protective mechanisms that women and men have developed, such as individual and collective coping strategies around housing, family, and community."[30]

Table 1 and the subsequent discussion provide a framework for how community-level factors affect health. This framework is derived from conceptual models found in the literature on public health and on the theory and practice of community building—community-driven efforts focused on improving neighborhood and family conditions. The framework describes the positive or protective effects that community factors can have, as well as the potential risks.

In this framework, a given factor may affect health through multiple pathways in independent and cumulative ways. For example, crime may have direct effects on the physical and mental health of victims, indirect effects on health-related behavior, such as the ability of residents to exercise outdoors, and may influence the quality and availability of services and economic opportunities, such as whether businesses will locate in the neighborhood. Similarly, strong social networks can have positive effects on health care, other support services, access to information, levels of assistance from neighbors, and economic opportunities. These advantages can lead to reductions in high-risk behaviors, including sexual risk-taking and drug and alcohol abuse. Many factors clearly impact two or even all three of the broad categories, but for conceptual simplicity are not repeated in the table.

Table 1: Conceptual Framework of Community Effects on Health

	FACTORS	PROTECTIVE FACTORS	RISK FACTORS
Social and Economic Environment	Neighborhood socioeconomic level.	Economically stable communities are healthier than poor communities.	Racial and economic segregation, concentrated poverty lead to higher stress, higher levels of premature mortality.
	Cultural characteristics-norms, values, and attitudes deriving from race/ethnicity, religion, or nationality, as well as from other types of social and cultural groupings.	Cohesion and a sense of community, with access to key cultural institutions with healthy cultural norms/attributes.	Racism, language barriers, and acceptance of unhealthy behaviors. Absence of community norms and expectations that promote healthy behavior and community safety.
	Social support and networks.	Friends, colleagues, and neighborhood acquaintances provide access to social supports and economic opportunities, as well as to certain health services and resources. Adult role models, peer networks are influential to young people. Networks exist within the community and beyond it.	Lack of social supports. Potential role models have left the neighborhood and have not remained connected to current residents or institutions. Residents do not have access to networks outside the neighborhood that would assist in providing access to employment and other key opportunities. Sometimes referred to as absence of "bridging" social capital.
	Community organization-level of capacity for mobilization, civic engagement, and political power.	Community organizations provide needed supports and services. Political power allows needed resources to be leveraged into neighborhood.	Lack of organization and political power impedes the flow of resources needed for neighborhood problem-solving and hampers community leadership development.
	Reputation of the neighborhood-perceptions by residents, outsiders may affect behavior toward the neighborhood.	Perceived as "good" or "improving" neighborhood with shared community and important regional attributes. Environment conducive to investment of new effort and resources.	Poor and "bad" neighborhoods are shunned, subject to negative stereotypes and discriminated against, limiting success of isolated improvement efforts.
Physical Environment	Physical features of the neighborhood-air, water, climate, etc., shared across a wide area.	A healthy physical environment.	Presence of and exposure to toxics and pollution.
	Physical spaces such as housing, parks and recreation, and workplaces.	Access to affordable, high-quality housing, local parks, and safe workplaces.	Exposure to lead paint, problems with inadequate sanitation and pest infestation, dangerous types of work (e.g., industrial in urban areas or logging/fishing in rural), and unsafe work environments.
	Public safety.	Desired and necessary amount of police and fire protection. Little crime, lots of street/sidewalk activity and interaction.	Prevalence of violence breeds fear, isolation, and a reluctance to seek even needed services, as residents avoid leaving their homes and spending time outside.
	Physical access to opportunities.	Good location and mobility for access to resources and new opportunities throughout the region.	Isolation of homes from job centers, particularly new suburban areas without public transit access. Distance from recreational facilities or safe parks for health-promoting activities such as exercise.
Services	Access and quality of health services.	Necessary, accessible care delivered in a culturally sensitive manner in satisfactory health facilities with well-trained and culturally appropriate practitioners.	Lack of access to necessary healthcare services, while what is available is culturally inappropriate and of poor quality.
	Access and quality of support services, including: Neighborhood-level public services-schools, parks, police and fire protection, transit, and sanitation. Community institutions-churches, clubs, and child care centers. Commercial services-grocery stores and banks.	Quality support services act as important neighborhood institutions providing needed services as well as venues for neighborhood meetings and leadership development.	Needed services are not available while those that are in the neighborhood are undependable and of poor quality.

Following is a review of each of the three broad categories, with an exploration of the research that has looked at the combined effects of neighborhood factors on health.

Social and Economic Environment

The social and economic environment of each neighborhood influences the health outcomes of residents, as described in Table 1. Neighborhoods that are poor, segregated, less organized socially and politically, and negatively perceived by outsiders, tend to be less healthy than those that are higher income and well organized. People living in poorer neighborhoods have higher stress levels, less access to resources, higher prevalence of unhealthy behaviors, and higher rates of premature mortality.

One informant working in Detroit noted that not only are people getting sick from preventable illnesses, but also some are needlessly dying. "Neighborhood factors impact health over and above individual level characteristics."

—Community-based practitioner

One study of premature mortality measured Years of Potential Life Lost before age 75 in U.S. counties and found significant variations by regions and by race/ethnicity.[31] Areas with larger proportions of African Americans, larger proportions of female-headed households, and residents with less education who experienced chronic unemployment had higher levels of premature mortality. Rural areas also had slightly more premature mortality than urban areas; southeastern and southwestern counties had the highest levels of premature mortality. These mortality findings and other health outcomes have generally been confirmed in studies that also included individual characteristics.

Longitudinal data from the Alameda County (California) Study also provide important evidence for the association between poverty areas and health. After adjusting for age, gender, baseline health status, and race, residents in the federally declared poverty area in the western part of Oakland still had an increased risk of mortality over a nine-year period. Further analysis and adjustments for other factors, including individual age, income, gender, and education, did not explain the excess risk associated with living in a poverty area.[32]

De facto segregation of African Americans is also associated with their high infant mortality rates.[33] Low-income African Americans are much more likely to live in high-poverty neighborhoods than are low-income whites or Latinos, and African Americans experience the highest amount of residential segregation and isolation from other groups.[34] One longitudinal study found that African American men ages 25–44 living in areas with the highest segregation had almost three times the mortality risk as those living in areas with the lowest segregation. The risk for African American women was almost twice as great.[35,36]

A study in 15 communities in the western United States found significant differences in smoking prevalence, alcohol intake, and seatbelt use, even after adjusting for individual demographic factors.[37] The study noted that residents of communities with higher unemployment rates had higher smoking rates and a higher percentage of calories from fats, but less alcohol consumption. Another study of youth found neighborhood effects on dietary habits after adjusting for individual characteristics.[38] Neighborhood characteristics associated with a healthy diet included higher income, higher education, higher housing values, and lower levels of mobility.

Some attempts to explain community-level variations in health have focused on social capital and political participation. Although various researchers have reviewed different aspects of social capital, they generally conceptualize it as a characteristic of communities, not of individuals. In the broadest

sense, there are two kinds of social capital: bonding capital, which deepens and increases the efficacy of social relationships within an immediate community; and bridging capital, which strengthens the links between one group and the people and institutions in the larger world. An urban neighborhood might, for example, need to develop close bonds within an ethnic group to promote healthy behavior in a culturally effective manner (bonding capital). The neighborhood might also need to build ties among different local groups to increase the neighborhood's political clout (bridging capital), to enhance services, or improve infrastructure.

State-level surveys of individuals' degrees of connectedness to friends, neighbors, and various groups provide a useful starting point for measuring social capital in a way that links it to health outcomes. Several analyses found that higher levels of social capital are associated with lower mortality rates and lower levels of self-reported fair or poor health.[39] Another state-level analysis found that a low level of social capital is a strong predictor of sexually transmitted disease and AIDS case rates and of many HIV-related risk behaviors among adolescents.[40]

Studies of social capital and health at the neighborhood level are less common, but one new book chronicles deaths during a severe Chicago heat wave in 1995 and finds that mortality was linked to differences in individual relationships and neighborhood institutions. A neighborhood with low levels of social capital had a mortality rate 10 times the rate of a neighborhood of similar income with higher levels of social capital.[41]

Physical Environment

The quality of the built and natural environment influences the health of neighborhoods and residents. For instance, physical activity is an important determinant of many health outcomes and is less prevalent in low-income populations.[42] In neighborhoods with poorly maintained housing, crime, and poverty, few incentives exist to encourage physical activity, and lack of safety can seriously inhibit recreation and exercise. Studies have also shown that exposure to factors such as noise, crime, or violence increases stress.[43] One study showed that residents of neighborhoods with high levels of crime and violence experienced more stress than residents in areas with less crime.[44] Stress is associated with a wide variety of health problems, such as poor pregnancy outcomes, high blood pressure, diabetes, cancer, respiratory infections, and heart disease.[45]

Other attributes of the physical environment, such as clean water and air, the availability of parks and recreational opportunities, safe streets, good housing, and physical access to economic opportunities, all contribute to creating a healthy neighborhood environment. Conversely, the lack of such conditions may directly harm residents or expose them to risk factors that lead to poor health.

Exposure to chemical, physical, and biological agents in the environment may be an important cause of preventable disease. Exposure can differ by neighborhood (e.g., levels of impact of traffic, industry, or contaminated water and land), but the

causal connection between environmental exposure and health disparities is not always clear. Nonetheless, research has shown that low-income communities of color have a higher number of polluting sites than wealthier areas.[46] Furthermore, individuals in certain neighborhoods and rural communities may be concentrated in occupations with greater potential health threats, including exposure to toxics.

Some communities have experienced success in challenging industries, governmental agencies, and businesses. For example, New York City residents in West Harlem, along with the West Harlem Environmental Action Taskforce, were able to link increased asthma rates with high rates of diesel bus fumes from a local depot. Stricter ordinances and standards were established as a result of advocacy campaigns aimed at improving air quality and the overall health of the neighborhood. The successful advocacy utilized air quality testing, asthma tracking, and community mobilization.

Neighborhoods with more environmental exposure are also more likely to bear the burden of other negative social or environmental conditions. One researcher described the high level of toxic exposure and loss of social capital in poor communities as "stripping and dumping"—stripping the community of its natural resources and dumping undesirable elements into it.[47]

A number of interviewees reported dramatic increases in asthma rates and other respiratory illnesses in both urban and rural areas. One informant, in particular, cited the need to study sub-groups of the broad Asian and Pacific Islander classification, as defined in the census, to detect disparities that are hidden in combined data sets. For example, he mentioned the over-representation of some Asian communities in the dry cleaning industry as contributing to an increase in lung diseases.[48]

Health effects are also associated with the quality of housing and other buildings. In fact, the origins of much of today's public health infrastructure arose from efforts to improve tenement housing conditions to combat tuberculosis and other contagious diseases at the turn of the 20th century. Poorly built and maintained homes can result in higher exposures to allergens that trigger asthma and present greater potential exposure to lead. Similar issues typically exist in schools and other public facilities in low-income neighborhoods.[49]

Public health research has identified many health hazards in the home, including improper ventilation, lack of heating or cooling, water leaks, molds and viruses, pests (mice, cockroaches, and dust mites), toxic chemicals in building materials and carpets, and building designs that contribute to falls, burns, and other injuries.[50]

The larger metropolitan patterns of development and transportation play a critical role in health disparities. The geographic isolation of low-income neighborhoods—a growing trend as much employment and retail move farther from central cities and beyond the reach of mass transit—often leaves neighborhood residents with limited job prospects or inadequate access to services. Lack of access to opportunities effectively places the entire community at risk for poorer health outcomes.[51]

Services

The concept of services as a broad category in the framework of neighborhood effects includes health care, along with the basic services typically provided by local governments; the local social support institutions that may be private, public, or nonprofit; and the basic commercial services, such as food stores, that are central to health outcomes. The

inequitable distribution of these services contributes to health disparities. Place-based approaches to health can serve two goals—improving service distribution and delivery and promoting the ingredients of healthier places and people.[52]

The availability of high-quality, culturally sensitive, neighborhood-based health services is an important determinant in access to health care and good health outcomes. Many rural areas and inner-city neighborhoods face serious challenges. Frequent barriers cited by lower-income, "non-compliant patients" include transportation difficulties, insensitive treatment, long waiting room intervals, and lack of clarity on the importance of clinical visits. Community resource centers with health services as a central component and school-based health clinics are two solutions to these challenges. Some communities also have health centers as part of public housing facilities and in recreational centers.

Many partnerships have been developed to help improve services and build the infrastructure needed to support healthy behaviors.[53] These typically involve multiple sectors of the community—public, nonprofit institutions, and for-profit businesses. The Healthy Neighborhoods Project in Richmond, CA, is an example of a local public health department collaboration with community representatives to design appropriate and sustainable health services, as well as to form and maintain a supportive coalition of community representatives.[54] In another example, university-based researchers, community practitioners, and public health departments have tried to negotiate the placement of businesses such as grocery stores in low-income and racially segregated neighborhoods to foster healthy eating habits.[55] Neighborhood resident participation and buy-in sustain such efforts.[56]

One community-based practitioner described public health Community Action Teams that are formed in local counties. These teams combine assessment, training, and action. They train residents to define health-related neighborhood concerns, interpret epidemiological data, hear local findings related to racial and ethnic health disparities, and discuss ways to solve these issues. In another example, lay health workers (*promotores*) have been used in many health outreach programs to improve the quality and reach of programs at community health clinics.[57]

Analysis of community needs can also lead to important new programs, as well as a reorientation of existing ones. Community-driven health assessments have led to more community-oriented and comprehensive approaches for programs and policies. For instance, in San Francisco, a community youth leadership program, in collaboration with the city's Department of Public Health, used a Health Impact Assessment tool to identify barriers in obtaining healthy foods. The programs that were developed as a result of the assessment connected residents to farmers' markets, thereby improving nutrition and strengthening social interactions. Beyond the economic impact of increased local spending and employment, residents felt empowered and better connected to one another.

Access to nutritious and reasonably priced food has become a focal point of research, community organizing, and local economic development efforts. A study of four states found that census tracts with higher median home values and a high degree of segregation had three times as many supermarkets as other neighborhoods.[58] The study also found that supermarkets were over four times more common in predominantly white neighborhoods compared to predominantly African American ones.

It is not only the absence of supermarkets, but also the preponderance of other types of stores that may be related to health outcomes. One study found over three times as many bars in the lowest, as compared to highest, wealth neighborhoods.[59] The role of race is raised in other studies, including one in Baltimore demonstrating that liquor stores are more likely to be located in census tracts that are predominantly African American, even after adjusting for median income.[60] In response, a local groundswell is emerging to restrict outdoor advertising and marketing of alcohol to certain ethnic groups and to limit the proliferation of alcohol outlets.

Just as undesirable services proliferate in lower-income areas, the types of establishments that can promote better health are less likely to be found. The Centers for Disease Control and Prevention has completed extensive literature reviews on the relationship between the built environment and health that focuses largely on physical activity.[61] One study of a San Diego neighborhood found that those who reported exercising at least three times per week had a greater density of user-pay recreation facilities near their homes than respondents who reported less exercise.[62]

Studies have found that there are barriers in physical environments in low-income neighborhoods that make it difficult for residents to exercise. A lack of park space and playgrounds is particularly a problem in high-density, low-income areas where children may not live in housing that has yards and therefore may rely more on these public spaces for playing outdoors. One survey found that people with lower incomes were more likely than those with higher incomes to say that heavy traffic, unattended dogs, and air pollution from cars and factories barred physical activity in their neighborhood. Other studies have found that residents say that concern about safety, lack of sidewalks, and their inability to afford to go to recreation facilities are problems that keep them from walking more than they currently do.[63] Yet, increasing the amount of walking that low-income communities and communities of color can do as a routine part of their daily activities, and increasing other forms of physical exercise, could help to reduce obesity and improve overall health, thereby reducing health disparities.

Many of these efforts, partnerships, and forms of analysis, outreach, and organizing are too recent to have been systematically evaluated with regard to long-term health outcomes of residents. Over the next several years, information and evidence should emerge that will help our understanding of the most effective strategies for linking public health with other organizations and for promoting the establishment of more health-supportive commercial environments.

Community Building: Improving Low-Income Neighborhoods

Community building emerged over the past 15 years as an approach to improving low-income neighborhoods. Central to the community building philosophy is the commitment to engaging community residents and leaders in the change process, building strong and enduring relationships, and enhancing community capacity to analyze and solve community problems. Proponents of community building have developed and implemented neighborhood-based initiatives designed to solve problems, some comprehensive and some targeted to specific problems or needs. Interviewees discussed how neighborhood residents had changed programs and how analysis of community assets and challenges had prompted action and change. For instance, a program in Washington, DC, was focusing on immigration, urban renewal, and planning issues since these were impacting residents' access to and quality of health care.[64]

Community Building:
"Continuous, self-renewing efforts by residents and professionals to engage in collective action, aimed at problem-solving and enrichment, that creates new or strengthened social networks, new capacities for group action and support, and new standards and expectations for life in the community." [65]

—Stories of Renewal: Community Building and the Future of Urban America

Comprehensive Community Building Initiatives (CCIs), while a relatively small and selective slice of projects employing a community building approach, provide useful lessons for strategies to affect health disparities.[66] These initiatives were established in a variety of low-income neighborhoods, including sites in Baltimore,

Oakland, Savannah, Detroit, and other cities—generally with broad and ambitious goals to reduce persistent poverty and revitalize entire neighborhoods.

At the core of CCIs is the belief that place matters in the lives of individuals and families. Organizations in many CCIs merged and modified elements of grassroots organizing, the integration and collaboration of human service agencies, comprehensive area planning, and housing and economic development programs to effect meaningful neighborhood changes. Many of those involved in CCIs acknowledged the need for diverse leadership and the importance of understanding race and racism for implementing successful changes.

"The problems of poor neighborhoods are as much political as they are technical. That fact suggests the need for a new politics of community-building—one with explicit strategies for exerting pressure on the people and institutions who do not naturally serve the interests of disadvantaged people."[67]

—The Aspen Institute

A recent summary of CCIs suggests that the initiatives succeeded with many of their capacity-building strategies and the improvement of service provision. They have laid a strong foundation for future impact.[68] However, the CCIs were strictly focused at the neighborhood level and did not have the orientation or capacities to understand, focus, and impact key structural issues and policies at the city, state, and federal levels. The lack of these key ingredients inhibited CCIs from fully reaching their ambitious goals.

The Combined Effect of Neighborhood Factors on Health

Some of the most important and rigorous research on the neighborhood effects of health compares families' outcomes in neighborhoods with different poverty levels. The U.S. Department of Housing and Urban Development's Moving to Opportunity (MTO) program presents evidence of the impact of concentrated poverty on individual health. This demonstration program provided specialized moving assistance to an experimental group of public housing tenants from high-poverty, central-city neighborhoods who were required to move to a nonpoor census tract.[69] Participants were compared to a group who received moving assistance but was allowed to move to any neighborhood and with a control group who did not receive any moving assistance.

Both groups receiving assistance reported significant improvements in their social, economic, and physical environments, as well as improved access to services, with the greatest improvements cited by the experimental group that moved to non-poor areas. Problems with homes (peeling paint, rodents, and nonfunctioning plumbing) as well as with neighborhoods (graffiti, abandoned housing, drug dealing, and insufficient recreational programs) were significantly reduced in participants' new neighborhoods. Those who moved showed improved social networks and higher labor force participation. In addition, there were significant improvements in health for both children and their parents.

Most dramatically, data from Boston showed a 74 percent decline in injuries and a 65 percent decline in asthma attacks needing medical attention for the children in the experimental group compared to the control group.[70] In New York, mothers in the

experimental group were less likely to report symptoms of depression and anxiety than either of the other two groups, and children in both moving assistance groups were less likely to report feeling unhappy, sad, or depressed in the prior six months than children who remained in public housing.[71] Similar findings in Boston showed improvements in both mental health and physical well-being for heads of households.

MTO sought to address the problem of concentrated poverty through housing relocation, a strategy designed to break the cycle of racially based inequality of neighborhood conditions that still characterizes many American metropolitan areas. Two interviewees who have followed the MTO research closely suggest that these significant findings will be augmented in the next several years by much more data on the effects of neighborhoods on the health of families and children. They, like many other urban policy researchers, conclude that health disparities related to neighborhoods must ultimately be addressed through urban policies that promote better housing, economic development, and racial inclusiveness.[72]

Key Lessons from Research and Practice: Implications for Action

4

The research findings previously described have important implications for policies and practices to promote health and reduce disparities. The framework suggests that—in addition to health policies—community, economic, and regional development policies become critical points of intervention. The challenge is in translating this framework into concrete strategies and actions. The first priority is to understand the important lessons from the literature and the experience and observations of practitioners who have taken an integrated approach to improving neighborhood and community health.

The impact of neighborhood factors must be viewed using a "life course approach."
Neighborhoods' effects on health change over time, depending on a person's age. It is therefore important to use a "life course approach" to understand how neighborhood factors affect health and health behavior over a person's lifetime. For example, the effects of social networks vary with age. Peer influences are particularly substantial for teens. Adults with long histories of unemployment, living in neighborhoods with high rates of unemployment, may be less affected by peer influences but more vulnerable to depression and to violence.[73] For low-income seniors living alone, like many of those who died at home in the 1995 Chicago heat wave previously cited, the key neighborhood influences may be fear of crime, which limits their capacity to leave their residence, and the presence or absence of supportive networks of people or organizations. One researcher refers to the gradual health decline, or "weathering" effect, that many African American women face over the course of their lives.

"The health of African-American women in general and those in high-poverty areas in particular may progressively worsen from youth through middle age through a variety of circumstances . . . including cumulative exposure to environmental hazards and ambient social stressors in residential and work environments and persistent psychosocial stress caused by . . . repeated social and economic adversity . . ."[74]

—Understanding and Eliminating Racial Inequalities in Women's Health in the United States

The impact of a given neighborhood factor also depends on which outcome is being measured. For example, the lack of public transportation in an area may affect teens more than adults, given that teens are much less likely to own a car.[75] Finally, numerous researchers note that it may take years of exposure to a given factor for it to have an effect on health.[76]

Community or place-based factors may respond to a "tipping point."

Community or place-based effects on health may be nonlinear and therefore difficult to measure.[77] In such cases, it is likely that there exists some threshold, or tipping point, at which the impact of a given factor markedly increases and becomes strong. For example, the impact of poverty on a family in a neighborhood in which 20 percent of the residents are poor is probably less than half the impact in an area in which 40 percent of the population is poor. In this case, the concentration of poverty is itself a risk factor, and the tipping point indicating a very strong effect on health, may lie between these two levels.[78]

The layering effect of various neighborhood factors presents challenges to measuring the impact or testing the effect of any single intervention.

The effects of neighborhood factors are the result of complicated interactions. Many neighborhood factors occur simultaneously and interact cumulatively—given the relationships between SES and health, and SES and the physical environments in which people live, with the added factors associated with race. This blending of factors presents challenges in identifying the impact of any single factor, which also suggests the absence of any single intervention or "magic bullet" to eliminate health disparities. (For instance, one informant who works at an urban gay and lesbian community center observed that lesbian, gay, bisexual, and transsexual (LGBT) people of color often experience a "double disparity" in access to care because they are treated differently based on sexual orientation and race/ethnicity.[79])

The intermingling of various community-level factors such as poor housing, unemployment, and unsafe neighborhoods combines to create adverse effects on residents' psyches, leading to increased risk for health disparities.

—Hospital-based practitioner

Specific strategies for reducing disparities must all be shaped by and for specific communities, whether neighborhood-based or dispersed, and whether urban, rural, or suburban.

The participation of residents and community leaders enhances the identification of key neighborhood

factors affecting their health, as well as the quality and reach of programs. Meaningful resident participation can also be a part of assessment, training, and action. It can ensure that health-related neighborhood concerns are understood and addressed in a culturally sensitive manner.

Addressing neighborhood factors affecting health will require attention and connections beyond the neighborhood.
To change neighborhood factors affecting their health, communities must consider those issues and policies beyond their boundaries—at the city, state, and federal levels. For instance, influencing housing authority or police department practices would be part of city-level actions, if not state and federal authorities as well, while strengthening clean air requirements might require action at the federal level.

Communities not defined by neighborhoods also face health challenges.
Communities that are not defined by neighborhoods or other local geographic boundaries are nonetheless affected by community factors in distinct ways. For example, some populations, including migrant and rural populations, and urban Indians may live in a dispersed network of communities but travel to a small number of neighborhoods for services and social interaction.

Both migrant and rural populations face difficulties accessing resources and services. Economic divestment of jobs and resources in rural areas has led to a dearth of accessible health services. Other key concerns are: safe working conditions, transportation, and affordable and dependable temporary and permanent housing. Pesticide, fertilization, and harvesting practices are part of a long list of work-related issues with potential health effects. Agricultural workers are also concerned with unsanitary housing conditions—unclean water and sewage problems—as well as overcrowding.[80, 81] Lack of mobility also contributes to depression and high-risk behaviors, including substance use.[82, 83] However, some rural populations have strong supportive social networks compared to urban populations, leading to benefits such as informal employment. With these and other benefits, the social networks are protective factors.

Communities that may be geographically dispersed, yet cross neighborhood boundaries to find culturally appropriate health care, experience unique health challenges. For example, access to the few urban Indian health centers is tenuous since Native Americans tend to be dispersed throughout metropolitan areas rather than residing in "urban Indian neighborhoods."[84]

Understanding the nuances of specific factors and their overall impact on health is critical to determining effective interventions. The growing body of research and experiences from community practice hold important lessons for future policymaking and implementation. The next section outlines general principles and strategies that could be the basis for such action.

Principles and Strategies for Reducing Health Disparities: Improving Community Health

5

Communities that are burdened by disparate health outcomes are typically racially or ethnically segregated, economically deprived, and physically and socially isolated, with limited resources. While there is still some uncertainty about precisely how various "place" factors can affect health—and which factors are most important for different populations—the consensus of researchers and practitioners is that creating healthier community conditions can improve health outcomes and reduce health disparities. How then to create healthier communities? The following principles delineate a course of action.

"Any attempt at conceptualizing neighborhood and place-based challenges must consider both the contextual and the governance issues. Perspectives that conceive of neighborhood effects as results produced only by the 'culture' or 'personality' of a neighborhood will be incomplete, as will approaches that focus only on governance or contextual factors. All of these factors together have an effect on residents and on the social dynamics of a community…"[85]

Equality of Opportunity and the Importance of Place: Summary of a Workshop

Principles for Reducing Health Disparities

Utilize multisector and multistrategy approaches to improve community conditions and individual health: there is no magic bullet.
The health of communities is influenced by many structural factors outside the neighborhood itself, including social and economic factors and policies beyond the public health arena. Strategies must therefore focus simultaneously on individuals (individual behavior change) and broader forces affecting neighborhoods (community conditions). Employment, education, housing, transportation, land use, and community development arenas must be engaged toward the common goal of improved health.

Tailor community-driven interventions to the specific community context.
Community contexts vary in terms of neighborhood conditions, community assets, the target population, and the issue of concern. Interventions must be shaped accordingly. Additionally, local ownership and meaningful community participation are key to developing, implementing, and sustaining community change efforts.

Understand and address the role of race and ethnicity in building healthy communities.
Race and ethnicity cannot be separated from place factors. In fact, many of the harmful effects of place are due to racial/ethnic and economic segregation. Moreover, many community strengths and assets are connected to racial and ethnic identity and culture—an appreciation of which must be woven into any approach or practice to improve community health.

"Racial and ethnic disparities in health care exist and, because they are associated with worse outcomes in many cases, are unacceptable." [86]

Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care

Strengthen and build upon community assets for the long term.
The capacity building required to strengthen communities is a long-term endeavor. Finding ways to connect local constituencies, service providers, and community leaders around a unifying agenda, as well as around important benchmarks for change, can make a significant difference.

Principles and Strategies in Action: A Case Study

The Harlem Children's Zone (HCZ) is a nonprofit community based organization that works to enhance the quality of life for children and families in a 24-block area of New York's Central Harlem. Founded in 1970, HCZ has taken a comprehensive, community building approach to fostering healthy communities. It has focused not just on specific education, health care, and social service initiatives, but also on "rebuilding the very fabric of community life."

The work of the Harlem Children's Zone is driven by the community and is tailored to the community's specific needs. For example, its asthma initiative—a partnership with Harlem Hospital, Columbia University, and New York City's Department of Health—had the goal of screening all children in the area, ages 0–12, for asthma. Initial results indicated that 26 percent of HCZ's children had asthma (four times the national average). Community health workers initiated assessments of homes, as well as environmental, social, educational, and medical interventions.

With the belief that family and community assets are critical to the success of any initiative, HCZ has divided the community into four specific neighborhood zones. In each zone, neighborhood residents develop vision statements and action plans to meet identified needs. They collaborate with churches, governmental agencies, local businesses, and schools to achieve their goals. Some of their achievements include a series of workshops and a project to improve the physical environment and increase community participation in sustaining improvements to city-owned and privately owned homes. A fitness and nutrition training program was launched; in its first year, almost 400 members were registered and 15 youth trained as managers of the fitness center.

To offer a safe haven and an alternative to the drug trade and street violence, another program—operated under the New York City Department of Youth and Community Development's Beacon Schools initiative—offers after-school and weekend educational and recreational activities for children, teens, and their families. It includes homework assistance, mental health counseling, teen pregnancy prevention, substance abuse preventive services, computer training, and leadership development.

The Harlem Children's Zone is supported by families, community organizations, and public institutions to ensure the optimal health and safety of children in Central Harlem.

Strategies for Policy Development and Action

Strategies for policy development and action start with an emphasis on community building at the neighborhood level and move through the steps involved in generating momentum, not only for good programs and local initiatives, but also for policy changes at many levels.

Use a community building approach to place-based health programs.
Developing new partnerships and involving residents in problem-solving and decision-making are key steps to community change efforts, including those focused on reducing health disparities. A community building orientation should be incorporated into health service provision and broader community improvement efforts. The lessons learned from comprehensive community building initiatives should help provide a realistic assessment of what is within the control and reach of a community-based effort and what requires a broader or more policy-oriented approach.

Invest in coalition building, community organizing, and advocacy.
Building a constituency for change is a critical element for success. The experiences of community building initiatives across the nation point to the importance of investing in community organizing, social capital development, and political participation in improving community well-being.

"We need to start by engaging both the top and the bottom—local community leaders and policymakers—not either/or."

— Health Practice Researcher

Enhance relevant knowledge development and research.
A new perspective on health disparities and communities can lead to research that better informs community practice. For instance, most of the research on neighborhoods and health has used artificially imposed definitions of neighborhoods, most commonly the census tract. With improved mapping technology, it is possible to draw connections between a community's own definition of its neighborhood and health factors.

Researchers also have a limited understanding of the level of influence a place has on residents. For example, the presence or absence of stores could have different meanings depending on a person's circumstances such as his or her access to a car. Policies and programs developed to address health and well-being issues also need evaluation in this context.

A greater emphasis on qualitative and ethnographic research could better demonstrate how people interact with their environments, how they gain access to opportunities, and what barriers they encounter along the way. Using participatory action research would involve community members in addressing their own problems and evaluating both the effectiveness of processes and outcomes.

"Success depends, among other things, on who is doing the formulating and framing, who's asking the questions, implementing the studies. Research needs to be reoriented to respect the role affected communities have to play in the process."

—Health Policy Researcher

Improve data collection and the use of community health indicators.
Both researchers and practitioners are interested in greater collection and use of community-level data to assist in planning, decision-making, and evaluating programs and policies. Tracking changes in measures or indicators of community health over time would allow communities to gauge progress towards reducing health disparities.

The selection of which community health indicators to track must involve community stakeholders who can act on the information. Such a system must develop an explicit framework that describes how indicators and social goals are related and how they may change dynamically in response to actions. Above all, it is important to choose and subsequently track indicators that measure a broad range of individual and community factors that affect health and ones that will motivate action or change. Ongoing evaluation of indicators projects will help ensure their continued relevancy. (These points are discussed in more detail in Appendix A.)

Utilize community-driven health assessments to determine priorities for needed services.
Research and planning with the participation of community residents can be invaluable for identifying the organizations and supports that represent assets, as well as for assessing challenges. It is key to shaping effective service and action priorities.[87] For instance, these assessments can identify the subpopulations most in need of services and

determine the most acceptable way to offer services.[88] Principles of Community Based Participatory Research (CBPR) offer valuable ways for residents to become engaged in neighborhood issues and to bridge the distance between traditional health organizations and community groups.[89]

Use local residents to enhance community outreach and to bridge cultural gaps.
The use of residents as *promotores* (lay health workers) or in other key staff and leadership positions can ensure that programs and practices are community-connected and culturally sensitive. Education, outreach, recruitment, and other functions can all be enhanced in this way. In addition, informed and engaged residents and staff are likely important actors in future policy activities.

"We need to identify and fund those groups on the margin who are most interested in the problem and have the most investment in the issue."

–Community-based researcher

Promote the use of Health Impact Assessments to identify health effects of broader policies.
Policies from a wide range of sectors—business, transportation, and economic development—can impact community health. Including analyses of these potential health impacts, called Health Impact Assessments, could help to improve knowledge and reorient action. Appendix B describes how Health Impact Assessments are becoming important parts of disparities initiatives in several countries, as well as in the state of Minnesota.

Create better linkages between policies for community/regional development and health.
Given the relationship between neighborhood conditions and health, policies must be developed that will lead to greater racial and economic integration of marginalized communities and to create more equitable allocation of public resources. To achieve these improvements, health activists and professionals must make racial and economic issues their own; community development specialists must also become engaged in health matters.

Reduce the concentration of poverty.
Greater racial and economic diversity and inclusiveness are needed on a metropolitan scale. The health benefits for families and children who leave environments of concentrated poverty for neighborhoods with less dire conditions are now being documented. These results parallel the documented educational and safety benefits associated with the better schools and safer streets found in wealthier neighborhoods.

Racial and Ethnic Approaches to Community Health (REACH) 2010 is a two-phase, five-year CDC demonstration project that supports community coalitions in designing, implementing, and evaluating community-driven strategies to eliminate health disparities. It serves as a promising model for creating needed linkages with various public-community sectors.

Conclusion

6

The principles and strategies discussed in the previous chapter, comprise an ambitious and a multifaceted agenda for change. They also represent a challenge, especially at a time when finding the resources and political will to provide even basic healthcare services is a formidable task. Nevertheless, this comprehensive agenda is necessary to bring about substantial reductions in health disparities. The wide range of areas that must be addressed needs to guide the organization of practical approaches to community change and revitalization.

Practitioners and researchers from public health, community building, community development, and environmental justice are searching for and developing new ways of working with low-income communities and communities of color to improve health and reduce health disparities. Clearly, overcoming health disparities will require multilayered and focused efforts over a long period of time.

Community leaders and residents can forge new partnerships with nonprofit, public, and for-profit leaders and institutions. Health and other service providers can open their facilities and programs to new collaborations with previously unfamiliar fields. Foundations can sustain and enhance their work through grantmaking that is consistent with the principles just discussed. Governments at all levels (city, regional, state, and federal) can take important steps by changing the bureaucratic requirements that keep health programs separate from other neighborhood services and by seeking to facilitate needed coordination and community building approaches. Federal and state governments can create real incentives for collaborative work and provide significant funding for community based initiatives. It is the combination of these steps and approaches that will most likely change the factors in low-income communities and communities of color that will ultimately allow us to eliminate health disparities.

Appendix A: Measuring Progress Toward Improved Community Health: The Role of Indicators

The Purpose of Indicators Projects

One way to gauge the impact of community efforts to improve health and reduce health disparities is to track health indicators over time. There are indicators projects across the country and the world. Although the scale, exact purpose, and function of indicators projects vary, all are based on the belief that the tracking of indicators and the dissemination of information about them, can support progress toward a shared goal (see Table 2). An example of an ongoing, large-scale health indicators project in the United States is Healthy People 2010, initiated by the federal government, but now widely used by many other state, local, and community-based groups to track progress towards the goal of eliminating disparities in health outcomes based on race and ethnicity.[90]

Criteria for Selecting Key Indicators to Track Health Disparities

Epidemiological studies have been useful in describing the existence and extent of health disparities as well as pointing to individual, social, and community factors that may be causes or correlates of those disparities. Many of these studies have contributed to an understanding of the importance of neighborhoods and communities to health. These studies point to three categories of potential indicators:

1) social or demographic descriptions (e.g., median income in the census tract, percent of households renting, percent of adults unemployed);
2) health outcomes (e.g., measures of life expectancy, disease prevalence, functional status); and
3) environmental or community conditions that impact health outcomes (e.g., spatial measures of ambient pollution, segregation measures).

The ability to gain access to data and generate numbers and statistics creates the potential for a large base of measurable indicators. However, to serve the purpose of supporting social change, indicators need to be deliberately selected with attention paid to key criteria. There is no one menu or master list of indicators.

A review of several indicators projects has produced various criteria.[91] These efforts suggest that indicators need to:

- reflect the values and social goals of those that will use and apply them;
- be accessible and reliably measured in all of the populations of interest;
- be comprehensible and coherent, particularly to those people who are expected to act in response to the information;
- be measures over which communities have some control, individually or collectively, and which they may be able to change; and
- move communities to action.

Table 2: Functions and Purposes of Indicators Projects

Planning	To identify needs To target resources
Evaluation	To measure programs or policies To analyze specific projects To quantify institutional performance To gauge the function of state and society
Coalition Building	To inspire and focus work To bring together partners or organizations with shared interests To support funding
Advocacy	To provide evidence or justification for change To validate shared experiences
Agenda Formation	To develop policy

Identifying and Tracking More Upstream Factors That Affect Health

Most existing indicators efforts, including Healthy People 2010, track measures of individual health status, such as specific diseases or conditions. This is because many public health interventions also focus on the individual. However, in addition to such measures, there may be several advantages to using indicators that measure upstream factors—the social and environmental factors that influence health over the course of an individual's life.

These upstream factors may be more efficient targets than those at the individual-level, as many health influences are nonspecific in their effects. For example, an intervention such as creating neighborhood walkways may both support physical activity as well as social interaction.

Because a person's health is the cumulative product of effects and experiences across a life course, tracking the impact of a particular intervention on health using individual health status may not be possible or timely. An upstream measure (e.g., the

quality of child care centers) may better reflect the direct effects of health-supporting interventions once the relationship between an environmental condition and health outcomes is established. Similarly, using indicators that reflect the "healthfulness" of places could provide important milestones not measurable for individuals, given their mobility.

Indicators that measure more upstream social and community-level factors also provide targets for action beyond the individual level. For example, creating access to affordable and fresh produce within a neighborhood supports healthy eating among neighborhood residents.

To the extent that indicators can influence public dialogue and agenda setting, upstream indicators may increase public attention to policy actions to support health. In this way, using upstream health indicators may help create a health agenda that appropriately reflects multiple levels of influence (i.e., individual behavior, community or neighborhood attributes, and broader policy change) and calls for involving leaders outside the health services sector.

Innovative Health Indicators Projects

The practice of developing and using indicators to track the health of local communities is increasing. Consequently, a variety of innovative programs are in place, focusing specifically on the refinement and use of indicators tied to a number of the community factors listed in Table 1. The Urban Institute has headed the National Neighborhood Indicators Partnership (NNIP) since 1996. One of NNIP's goals is to advance the development and use of neighborhood-level information systems in local policymaking and community building. This partnership, whose members first began by mainly tracking indicators related to housing, community economic development, income and employment, and other urban policy-related topics, is now being expanded to include specific "innovative health indicators." Another example of neighborhood-level, health-related indicators is the Seattle Communities Count indicators project, in which local community members develop and evaluate indicators, with four types of indicators already in place: measures of basic needs and social determinants of well-being, positive development through life stages, safety and health, and community strength.

Other examples of ongoing indicators programs focus on the health of neighborhoods rather than specifically on the health of individuals.[92]

Indicators facilitate measurement of change or progress.[93]

–Health Canada

Appendix B: Examples of Large-Scale Initiatives to Improve Health and Reduce Disparities

Several large-scale government initiatives address health disparities by focusing on social determinants of health, including the Minnesota Department of Health, Health Canada and, the United Kingdom Department of Health.[94] These types of initiatives provide useful insights for how policies can be developed to reduce health disparities.

The Minnesota State Health Department, Health Canada, and the United Kingdom Department of Health share many similarities in their approaches:

- All three emphasize that initiatives such as theirs require a long-term commitment. Changing social determinants of health, which have had a cumulative effect on health over many years, will often take many years before results on health outcomes are visible.

- All three concentrate on creating environments that will reduce disparities in health, beyond a focus solely on individual decisions and behaviors.

- All center on involving multiple sectors and partners, noting that it will often be necessary to include initiatives that originate outside the traditional health sector. Examples include initiatives related to affordable housing, transportation system development and design, employment programs, and minimum wage standards.

- Minnesota and Canada also emphasize the importance of broad community participation in programs and policies designed to reduce health disparities. Canada describes public involvement as one of the key elements to its approach.[95] Minnesota notes that community development and participatory research demonstrate the success that can be achieved through active involvement of community members in all aspects of community change efforts.

- All recommend the use of Health Impact Assessments (HIA), which weigh the health consequences of programs and policies, including those that originate from nonhealth sectors such as

housing or transportation. Minnesota defines HIA as "an emerging approach to policy development and program planning designed to assure that current and future policies, programs, and/or organizational structure contribute toward meeting public health improvement goals, or at least do not hamper achievement of those goals."

- All three explain that their progress in improving health will be evaluated by measuring long-term reductions in health inequalities, but also by measuring interim social and economic factors that are expected to affect health outcomes. Examples of interim determinants that can be measured include: changes in individual knowledge and behavior; changes in social, economic, and environmental conditions; and changes in health and public policy infrastructure.

- All three emphasize integration of interventions. Health Canada notes that this strategy is useful since many diseases, such as diabetes, cardiovascular disease, and cancer, share the same risk and protective factors. Health Canada comments, "A concerted effort to address these common factors would protect against all three diseases, probably more effectively than three uncoordinated, disease-specific prevention programs."

Appendix C:
Roster of Roundtable Participants

Gwenn Baldwin
Former Executive Director
LA Gay and Lesbian Center

Ignatius Bau
Deputy Director for Policy & Programs
Asian Pacific Islander American
Health Forum

George R. Flores, M.D., M.P.H.
Public Health Consultant

Hector Flores, M.D.
Co-Director
White Memorial Medical Center
Family Practice Residency Program

Elia Gallardo
Deputy Director, Policy
California Primary Care Association

Carla Javits
Executive Director
Corporation for Supportive Housing

Betty King
Senior Advisor to the CEO
The California Endowment

Kathryn Pettit
Research Associate
The Urban Institute

Deborah Prothrow-Stith, M.D.
Professor of Public Health Practice
Harvard University
Department of Health Policy and Management

Marion Standish
Senior Program Officer
The California Endowment

Marian Urquilla
Executive Director
Columbia Heights/Shaw Family Support Collaborative

Irene H. Yen, Ph.D., M.P.H.
Epidemiologist
Health Inequities Research Unit
Environmental Health Section
San Francisco Department of Public Health

Appendix D
List of Interviewees

Gwenn Baldwin
Los Angeles Gay and Lesbian Coalition

Karen Bass
Los Angeles Community Coalition

Maria Casey
Partnership for the Public's Health

Mindy Fullilove
School of Public Health
Columbia University

Jane Garcia
La Clinica de la Raza

Sandra Hernandez
San Francisco Foundation

Joselito Laudencia
Asian Pacific Environmental Network

Marsha Lille-Blanton
Kaiser Family Foundation

Ruth Perot
Summit Health Coalition

Deborah Prothrow-Stith
Department of Health Policy and Management
Harvard University

Arcadio Viveros
Salud Para la Gente Health Center

Fernando Guerrez
Department of Public Health
City of San Antonio

Felicia Collins
Health Resources and Services Administration

Sheryl Walton
Department of Public Health
City of Berkeley

Sherman James
Department of Epidemiology
University of Michigan

Ignatius Bau
Asian Pacific Islander
American Health Forum

Joseph Betancourt
Institute for Health Policy
Massachusetts General Hospital

Jim Crouch
California Rural Indian Health Board

Phill Wilson
African American AIDS Policy and Training Institute

Ingrid Gould Ellen
Robert F. Wagner Graduate School of Public Service
New York University

Embry Howell
The Urban Institute

Marian Urquilla
Columbia Heights/Shaw Family Support Collaborative

Margery Turner
The Urban Institute

Rick Brown
School of Public Health
UCLA

Terry Bailey
The Piton Foundation

Kathryn Pettit
The Urban Institute

Alan Cheadle
University of Washington

Charlotte Cunliffe
Greater New Orleans Community Data Center
Tulane University

Barbara Krimgold
Center for the Advancement of Health

Bob Prentice
Partnership for the Public's Health

Arnold Perkins
Department of Public Health
Alameda County, California

Matt Hamilton
The Piton Foundation

David Swain
Community Agenda Indicator Project
Jacksonville, Florida

Arun Narayanan
Key Indicators of Public Health
Los Angeles County Department of Health Services

David Johnson, Gopal Narayan, and Pat Harrison
City of Minneapolis

Robin Sohmer
City Health Department
Pasadena, California

Claudia Coulton
Center for Urban Poverty and Social Change
Mandel School for Applied Social Science
Case Western Reserve University

Katie Murray
Providence Plan

Endnotes

[1] Social Capital: "Those features of social organization—such as the extent of interpersonal trust among citizens, norms of reciprocity, and density of civic associations—that facilitate cooperation for mutual benefit."—Kawachi (1997).

[2] See Appendix C: Roster of Roundtable Participants.

[3] J. McGinnis, P. Williams-Russo, and J. Knickman, 2002.

[4] We recognize that the term community also may apply to groups of people who do not live in immediate proximity to each other, but nonetheless come together and form a shared connection through an institution (such as a church or clinic) or some other place.

[5] See the references at the end of this report for many of these papers. The fully annotated bibliography and literature review is forthcoming as a separate publication.

[6] Goldman, 2001; House and Williams, 2000.

[7] Diez-Roux, 1998; Smedley and Syme, 2000.

[8] Adler et al., 1994; Backlund et al., 1999; Haan et al., 1987; House and Williams, 2000; Krieger and Fee, 1994.

[9] Blau and Duncan (1967) were among the first sociologists to employ a causal framework in this way.

[10] Wilkinson, 1996.

[11] Adler et al., 1994; Marmot et al., 1991.

[12] House and Williams, 2000.

[13] Williams, 1997.

[14] Smedley and Syme, 2000.

[15] Goldman, 2001.

[16] Morland et al., 2002; Sallis, 1990.

[17] Byrd et al., 2002, p. 248

[18] Interview with director of a nonprofit health policy organization.

[19] Smedley et al., *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, Washington, DC: Institute of Medicine, 2002.

[20] Interview with university-based researcher and practitioner.

[21] Interviews with a director of a community clinic and a director of public health department.

[22] The so-called Latino health paradox was first documented by Markides and Coreil (1986); Alderete et al., 2000; Guendelman, 1995; Vega and Amaro, 1994.

[23] Vega and Amaro, 1994; Weigers and Sherraden, 2001.

[24] Ellen, Mijanovich, and Dillman, 2001. See also Leventhal and Brooks-Gunn, 2000: High SES neighborhoods were found to be associated with high achieving children and neighborhoods with low SES and residential instability were found to be associated with children with behavioral and emotional difficulties.

[25] House and Williams, 2000.

[26] Ellen, Mijanovich, and Dillman, 2001.

[27] Leith, Mullings, et al. 2001.

[28] Ellen, Mijanovich, and Dillman, 2001.

[29] MacIntyre and Ellaway, 2000.

[30] Mullings et al., 2001.

[31] This was an "ecological" study using only aggregate data without any individual-level data; Mansfield, Wilson et al., 1999.

[32] Other factors included income, employment status, access to health care, health insurance coverage, and depression; Haan, Kaplan, and Camacho, 1987.

[33] Ellen, 2001.

[34] Jargowsky, 1997, especially chapter 3.

[35] Williams and Collins, 2001.

[36] Jackson, Anderson et al., 2000.

[37] Diehr, 1993.

[38] Lee and Cubbin, 2002.

[39] Kawachi, 1999.

[40] Holtgrave, Crosby, Wingood, DiClemente, and Gayle, 2002.

[41] Klinenberg, *Heat Wave: A Social Autopsy of Disaster in Chicago* (Chicago: University of Chicago Press, 2002). Klinenberg's study was cited by Kawachi in this respect in a presentation to the First International Conference on Inner City Health, Toronto, October 4, 2002.

[42] Centers for Disease Control and Prevention, 1996.

[43] Evans, 1997; Ellen, Mijanovich, and Dillman, 2001.

[44] Garbarino et al., 1992.

[45] Fitzpatrick and LaGory, 2000.

[46] Lee, 2002.

[47] Interview with university-based researcher.

[48] Interview with senior staffperson a nonprofit policy-oriented organization.

[49] Leventhal and Brooks-Gunn, 2000.

[50] Krieger and Higgins, 2002.

[51] These and other issues of social and economic disparities resulting from regional development patterns are discussed in PolicyLink, 2002 a; powell, 1998; and Orfield, 2002.

[52] Fitzpatrick and LaGory, 2000, p.205.

[53] Brown, Watkins-Tartt, and Brown, 2001; Kass and Freudenberg, 1997; interview with a community-based practitioner. One impressive example is the Partnership for the Public's Health, a California-focused initiative, funded by The California Endowment that is supporting partnerships between public health departments and community organizations in 14 California counties.

[54] Interview with a community-based practitioner.

[55] A good example of such a program is the REACH Detroit Partnership, a project of the Detroit Community-Academic Urban Research Center.

[56] Smedley and Syme, 2000.

[57] National Health Education Training Center (HETC) Program. 2002.; McQuiston and Uribe, 2001; The California Endowment, 2000.

[58] Neighborhood wealth was measured as median home values in the census tract. Neighborhood segregation was measured as the proportion of black residents in the census tracts, with those with greater

than 80 percent black residents being defined as predominantly black. Morland et al., 2002.

[59] Tatlow, Clapp, and Hohman, 2000.

[60] LaVeist and Wallace, 2000.

[61] Frank, 2001; Frank, 2001.

[62] Sallis et al., 1990.

[63] PolicyLink**,** 2002.

[64] Interview with director of a neighborhood collaborative in Washington, DC.

[65] Stories of Renewal: Community Building and the Future of Urban America. P.ii

[66] Chaskin and Brown, 1996; Walsh, 1997.

[67] Aspen Institute, 2002. p. 85.

[68] Aspen Institute, 2002.

[69] The experimental group was required to move to census tracts with less than 10 percent of residents in poverty. For a collection of research findings from all the cities in the MTO program, see *Poverty Research News,* 2001.

[70] Del Conte and Kling, 2001.

[71] Leventhal and Brooks-Gunn, 2000.

[72] Interview with university-based researchers.

[73] Interview with a researcher at a nonprofit organization.

[74] Geronimus, Arline, 2001. p.135.

[75] Interview with a university-based researcher.

[76] Halfon and Hochstein, 2002; Fitzpatrick and LaGory, 2000.

[77] Ellen, Mijanovich, and Dillman, 2001.

[78] Ellen and Turner, 1997; Wilson, 1990.

[79] Interview with a nonprofit community-based practitioner.

[80] Azevedo and Bogue, 2001; Lighthall, 2000.

[81] Housing Assistance Council, 2001.

[82] Villarejo et al., 2001.

[83] Ruiz and Molitor, 1998.

[84] Forquera, 2001.

[85] Equality of Opportunity and the Importance of Place: Summary of a Workshop, p. 62. 2002

[86] Institute of Medicine, p. 30. 2002,

[87] Leung et al., 2001; conversation with a County Maternal Child Health Director.

[88] Eng and Blanchard, 1990–91.

[89] See Minkler and Wallerstein, 2002 for a recent description of Community Based Participatory Research (CBPR) principles, methods and examples. Citing Minkler and Wallerstein, Blackwell et al. 2001 write that CBPR "is an approach that turns upside down the more traditional applied research paradigm in which the outside researcher largely determines the questions asked, the tools utilized, the interventions developed, and the kinds of results and outcomes documented and valued."

[90] U.S. Department of Health and Human Services, 2000.

[91] Kingsley, 1999; Chrvala and Bulgur, 1999.

[92] Additional examples include the Champlain Initiative in Vermont, the Denver Project funded by the Piton Foundation, the Community Agenda Indicator Project in Florida, the Minneapolis Quality of Life Indicators Project, and the Pasadena Quality of Life Index, among others.

[93] Health Canada, 2001

[94] The King's Fund, a private foundation in England, seeks to reduce health inequalities and to address the social determinants of health. It has analyzed and produced a report on different approaches and indicators and has developed strategies to help public service organizations partner effectively with communities. Local regions in England have used the report to help them implement the government's plan to reduce inequalities

[95] Health Canada, 2001

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